Volunteer Firemen

Professional Journal of the Volunteer Firemen's Section

International

A hangar at the Miami Municipal Airport was destroyed by fire on the night of April 2, with a loss of $500,000. Among the valuable planes destroyed were a record holding experimental Seversky pursuit craft valued at $250,000, and a Lockheed Electra worth $120,000, which was used by Jimmy Mattern in his search for the lost Russian polar fliers last year. Such fires will occur as long as hangars lack automatic sprinkler systems. See editorial on page 3 of this issue.

Fire at Miami Airport

Also in this issue—Making a Good Job of It—Laying Hose from Fire to Hydrant—State Laws Control "Bootleg" Fireworks

Volume 5, Number 6 BOSTON, MASSACHUSETTS June 1938

National Fire Protection Association

INTERNATIONAL

Not more than 500 feet to the nearest box in closely-built residential districts . . . convenient to every group of buildings, manufacturing establishments, and institutions in sparsely-built districts . . . in congested high-value districts—"A Box a Block"—with special attention to Life Hazards . . . a safe rule to follow.

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Time Lost in announcing fire is reflected in scenes as above . . . and the community *Loses*. . . .

Time Saved while fires are in their incipiency is reflected in small fire losses and greater security . . . and the community *Profits*.

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NEWTON UPPER FALLS MASSACHUSETTS

HORATIO BOND Managing Editor

A FEW weeks ago the chief of a volunteer fire department in Maine wrote us to ask what equipment his department should carry to handle fires in the local airport. In our reply we pointed out that unless an airport had adequate private fire protection, especially automatic sprinklers backed with strong water supplies, there was little likelihood of the fire department arriving in time to control a serious fire. Airplanes and gasoline, which are the principal contents of airplane hangars, burn so rapidly that it is seldom possible to get hose streams into operation fast enough. First aid fire equipment if available can often be effectively used at the start, while the fire is small. For all fires not nipped in their incipiency, automatic sprinkler protection is almost the only hope of preventing a large loss.

The above facts are well confirmed by the fire which destroyed a hangar at the Miami Municipal Airport on April 2, as shown on the front cover of this magazine. This fire had considerable headway when discovered by the night watchman who promptly attacked it with chemical extinguishers. When the fire department arrived after a 12 minute run, a series of explosions due to gasoline and doped airplane wings were spreading the flames through the 125 by 75 foot structure. The water supplies available at the airport amounted to only 600 gallons per minute. This is another point where airport protection is commonly at fault.

AS THIS is written, the National Fire Protection Association has just completed its forty-second annual meeting which was held at Haddon Hall Hotel, Atlantic City, the week of May 9-12, 1938. The four-day program was an unusually heavy one, the reports of thirty-six technical committees being acted on and special messages being heard from eighteen distinguished speakers.

Plans of the International Association of Fire Chiefs to get actively behind the firemen's training movement were announced by Chief Daniel B. Tierney, President of the International Association of Fire Chiefs, and Frank Cushman of the U. S. Office of Education explained the part which the federal government is to play in this work.

There was widespread interest in the new specifications for automobile fire apparatus proposed by the N.F.P.A. Committee on Municipal Fire Apparatus. The rating of pumpers at higher pressures caused the most discussion and the convention voted to refer the specifications back to the committee for further study during the coming year. The committee is therefore soliciting further comment. Its Chairman, Joseph N. Sullivan, Commissioner of Public Safety and Chief of the Fire Department, Utica, N. Y., would welcome suggestions dealing with any phase of motorized fire apparatus, particularly such details as ladders, enclosed body design, and ignition.

Complete details on the annual meeting will be given in the *Proceedings* which will be issued to all N.F.P.A. members in July.

LAST month 14 departments with 359 men joined the Volunteer Firemen's Section for the first time, the largest number since last May. In addition 39 fire departments with 889 men renewed membership bringing the total for the Section to 592 departments and 13,296 firemen. The following departments are newly enrolled:

Fort Morgan Volunteer Fire Department, Fort Morgan, Colorado.
Gladstone Volunteer Fire Department, Gladstone, Michigan.
Ronan Volunteer Fire Department, Ronan, Montana.
Lake Hiawatha Volunteer Fire Association, Inc., Parsippany, Troy Hills, New Jersey.
Millburn Fire Department, Millburn, New Jersey.
Wright Aeronautical Corporation, I. J. Gunther, Paterson, New Jersey.
Grafton Volunteer Fire Department, Grafton, Ohio.
North Bend Fire Company, No. 1, North Bend, Ohio.
Animal Trap Company of America, Lititz, Pennsylvania.
Standard Sanitary Manufacturing Company, Pittsburgh, Pa.
Corona Fire Department, Corona, South Dakota.
Menomonie Fire Department, Menomonie, Wisconsin.
Red Granite Fire Department, Red Granite, Wisconsin.
Bridgewater Fire Department, Bridgewater, Nova Scotia.

Volunteer Firemen

Volume 5 Number 6

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Franklin H. Wentworth Managing Director
Percy Bugbee Assistant Managing Director
Robert S. Moulton Technical Secretary
DeWayne E. Nolting Fire Record Department

Please notify us promptly of any change of address

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A Problem Question
FOR JUNE

Suggested for discussion at company and department meetings this month

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Does lightning strike twice in the same place?

Watch for the answer in the next issue of VOLUNTEER FIREMEN. The answer to the problem question for May will be found on page 8.

Warren Y. Kimball Associate Editor

Making a Good Job of It

Fire Company No. 1 Knew It Wasn't Equipped to Handle a Big Fire But That Didn't Prevent Them from Giving It Everything They Had

By Warren Y. Kimball

FIRE Company No. 1 had just finished a spring training program. The chief and several of the boys had just come back from the state drill school and had eagerly shown the rest of the company the latest stuff. As a result Company No. 1 had put on some snappy drills including pumper hook-ups, practice in running lines up stairways and over ladders. All hands had the feel of the hose and knew how to handle a charged line. In the company meetings they had sized up most of the town's "target hazard" buildings and discussed the possibility of effectively handling any blaze that should occur in them.

"If some of the stuff we have in this town ever gets going, it would make a good three alarm fire in most any big city," Captain Buck of the pumper said at the company meeting. "All we've got is a pumper good for two lines and an old combination truck. The water supply is nothing to brag about either."

"Well," replied the Chief, "the town has always been lucky and has never known what it meant to be threatened by a really big fire. Most people think that the fire department costs too much now, but they don't squawk over paying for that municipal golf course. We have always been able to handle an ordinary dwelling or store fire. If a big barn gets going it's a case where we keep the fire from spreading to the house. Where the ordinary small volunteer fire company like ours gets licked is when one of the few big buildings like the consolidated high school, the churches, or the municipal center get going. Those are the fires that make the big losses."

"And they set folks talking about the department," countered the Captain. "When a big fire starts every person in town thinks that they know what the fire department should do. . . . Well, I'll see you when the siren blows."

A FEW mornings later came one of those hot, dry, stifling days that often come at the beginning of summer. No one seemed to have much pep by lunch time. Just then the siren blew. "Probably a late-in-the-season brush fire," thought the captain as he made for the fire station. A couple of fellows were already at the station with the doors opened and the pumper pulled out in front.

"It's the consolidated high school," they reported. "They say it's going bad."

"Let'er go then," ordered the captain as he swung into the front seat. "We'll pick up Art and Bill at the next corner. That will give us a five-man crew to start with. The chief will come in his own car if he's around. . . . Say, you sure can see the smoke!"

ON APPROACHING the building it was clear that the entire third floor was involved. There was plenty of smoke and quite a bit of fire showing behind the windows. "Looks like a goner!" shouted one of the men from the back step.

"Well, it's no hydrant line job," observed the captain. "Lay out from the front of the building and connect the pump to the corner hydrant. It's on a six inch main and will give us two lines."

"It's the best we can do," he told the driver.

Stopping before the building the captain gave further orders. "It's a good sized building, so take off at least 200 feet of hose to work with before going to the hydrant. Drop off the 30 foot extension ladder while the pump is here. We might want it. Art, you go to the hydrant and help hook up the pumper."

"Where are you going to work the line?" asked Bert excitedly. "It all looks hopeless to me."

"Put on a hose clamp so we will have a dry line until I take a look and see where it will do the most good," replied the captain. "Guess we might as well shoot through the third floor windows when we get the water. There's plenty of fire showing there."

"Wait, here comes the chief."

"Shall we work the line from out front here?" the captain asked the chief.

"No boys, there is only one way to lick this fire and that is from the inside. We can't throw enough water through those third floor windows to do any good. The streams won't penetrate. There will be spectators enough outside. It's our job to try to stop this fire and show the folks that our drill work is worth something."

"Bert, you take the pipe and we'll use the shoulder load. Each man take 50 feet of hose. . . . Let's make the top of the main stairway. Get a helmet on, every one of you, before you go inside!"

A few seconds later, three men had the shoulder loads on and were moving toward the building one following about 15 feet behind the other. Smoothly the line payed out. As they moved up the stairway the line was gradually dropped off shoulders and stretched in readiness for use.

Meanwhile additional firemen had showed up, among them the deputy chief.

The chief put them at work promptly. "Three of you men throw the 30 foot ladder and poke out the third floor windows with a pike pole while we run our line," he ordered. "We haven't got a ladder long enough to give us the roof ventilation we need. Window ventilation is the next best thing."

Turning to the deputy the chief said, "Take the rear of the fire and have the lieutenant lay a second line from the pumper with the combination truck. Take it up the fire escape to the top floor at the rear of the building. That will bring us up against this blaze from two sides. Also, get into the second floor as soon as possible. See that no fire drops down any shafts or openings. Have some of the men open up any hot spots in the second floor partitions and ceilings but don't open anywhere unless you have a line available. Better get the booster line under the fire right away and then run a hydrant line."

MEANWHILE Captain Buck and his crew were making the main stairs. It was tough going as smoke was backing down in thick, choking clouds. "Don't think we can stay here long enough to do much good," grunted the captain through the crackling of the flames. "We'll not have water enough to kill this fire anyway."

"Here's a couple of extra men, captain," sings out the chief, who with additional arrivals, has followed the line up the stairs. "I've ordered some ventilation," he announced. "Heat rises and

we're under the fire and will be all right as soon as we get it. . . . Stop on this balcony between the second and third floors. Loop a little extra hose around so we will have some extra to advance the line. Keep down and close to the wall. We're fairly well protected by the stairs. Art, you go back for water. We've got 400 feet of hose out and a 1⅛-inch nozzle. The friction loss is 60 pounds, we want 45 pounds at the nozzle, and we need 15 pounds extra for this elevation. So tell the operator to give us 120 pounds engine pressure. When you come back, be sure to straighten out any kinks in the line as we need a good stream.

"All right, Bert, let the air out of your line. Don't open the pipe too fast as it might get away."

Then the crash of glass announced the breaking of windows. Almost immediately the smoke lifted but the fire seemed more intense. "All right boys, open the pipe wide and kill all the fire over the stair shaft and in the hallway."

Gradually the fire in the top floor hallway was blacked out but the smoke got a little thicker.

After reconnoitering at the top of the stairs the chief called out, "Captain, shut down your pipe and bring your line up here. . . . Kill what fire you can through the doors to the different class rooms. . . . Don't leave the hall as the ceilings over those rooms may be dangerous. . . . Keep your men low and relieve them in turn until the air clears a little more. . . . I'm going to bring that other line in from the rear to meet you. Better keep at least a four man crew on your line. I'll send up some men with axes and plaster hooks. . . . Open up any hot places in the walls and pull the ceilings so as to root out the fire."

Going to the second floor, the chief found the deputy with a 1½-inch line fed by a hydrant line. "Not much fire down here yet," the deputy reported. "We're checking all the hot spots in the walls and ceilings. The lieutenant has a good pumper stream going in the rear."

Outside, the chief got hold of a couple of late arrivals. "Take the four salvage covers from the pumper and see what you can do in the school office on the first floor. I guess not much water has come in there yet. Then report to the deputy on the second floor."

Going to the rear, the chief climbed the fire escape. Quite a bit of fire was still showing in the rear classrooms but the hose crew had been able to kill the fire in the rear hall off the fire escape.

Anthony Cabral

The fire fighting problem involved in the school fire illustrated was much like that of the accompanying story. When discovered the fire had gained great headway in the upper portions of this old fashioned three story brick-joisted high school building. In spite of limited water supplies and pumping apparatus, a volunteer fire department confined the fire to the top floor and roof.

"Bring the line inside now, fellows," the chief said. "As soon as you knock down the worst of the fire we'll put a couple of 1½-inch lines on the end of this line and clean up the job at close range. Enough of the roof has burned through to give us pretty good ventilation. Just a little while longer and we'll get this thing licked. Just look out where you step and don't get under anything that looks too dangerous."

By that time the deputy had come up the front stairs.

"You can take charge here and see that the concealed spaces are opened up and all fire knocked down. Keep the lines moving around. I don't want playpipes opened except when fire is showing. I'm going to check up down stairs," the chief stated.

Out in front, the school principal rushed up. "I didn't think there was a chance of saving it, chief," he observed. It's a good thing that school was over for the summer. What started the fire?"

"Well," replied the chief, "with our small outfit it did look bad. Our only chance was to come up under it at close range. The fire started in that third floor janitor's closet."

"It looked like quite a job when your boys were taking their hose up the back fire escape," said the principal.

"If the school board and its architect had provided a couple of good enclosed inside stairways, it would have been easier for us to get at the fire at close range. Open stairways and outside fire escapes are old fashioned and mighty dangerous to the children.

"They don't ask the fire department about it before building these fire traps, so we have to take 'em as we find 'em when the siren blows and give 'em everything we've got."

"Well, you can be proud of your department," said the principal.

"You don't know the half of it," said the chief, winking to the captain who came down to report everything under control.

Membership Plan

VOLUNTEER FIREMEN'S SECTION
NATIONAL FIRE PROTECTION ASSOCIATION

INDIVIDUAL membership in the National Fire Protection Association costs $10 per year. The membership plan for the Volunteer Firemen's Section is designed to give each fire company the advantages of N.F.P.A. membership. The fire company, as a member, receives at its headquarters a complete set of all regular N.F.P.A. literature, including the *Quarterly* magazine, as issued. In addition, as a special service to the Volunteer Firemen's Section, each fire company holding N.F.P.A. membership is entitled to have copies of the magazine VOLUNTEER FIREMEN sent to the home addresses of 20 firemen each month. If more than 20 firemen want to receive the magazine, an additional 50 cents should be sent in with the membership fee for each fireman in excess of 20 enrolled.

Because of the large amount of material mailed to members, not less than $10 can be accepted from any company.

Laying Hose from Fire to Hydrant

It's a Good General Rule Always to Hook Up Pumper on Big Line—Fire to Hydrant Layout Makes This Possible

MANY years of practice have perhaps made traditional the custom of laying hose from the hydrant to the fire even where it may not be the most convenient method. This practice was the natural result of using horse drawn apparatus and direct hydrant streams. In the old days the hose wagon rolling up to a fire laid a line from a hydrant to the blaze. If a pumper were used it was a steam engine without hose and it went directly to the hydrant.

Motor pumpers of today are usually both hose carriers and pumpers and must perform the work formerly done by two separate pieces of apparatus. There are some departments which simply use their pumpers as hose trucks and take a chance that direct hydrant pressures will prove sufficient. Such departments in many cases are not making the best use of their pumping equipment. Where pressures are exceptionally good and lines are short a pumper may not be necessary for all fires. However, a good general rule is to always hook up the pumper. After a hydrant line has been placed in service it is often inconvenient to shut down the stream while a pumper is being placed in service even if more pressure is desirable.

Such operating difficulties may be readily overcome and regular use made of pumping equipment if lines are laid from the fire to the hydrant instead of from the hydrant to the fire. Under this modern practice the apparatus lays the line from the fire to the hydrant and the pump is immediately connected up ready to supply the proper pressure.

In many departments where the fire to hydrant layout has now become standard procedure, the hose is loaded on the apparatus with the female coupling placed in the hose body first so that the line will lead off with a male coupling. Of course where hose is loaded to lead off with a female coupling it is possible to make the fire to hydrant layout by means of double or reversing couplings. However, the use of double couplings is just one more operation which may be avoided if the hose is loaded as described above. In addition where the hose is loaded with the male coupling off first, the nozzle may be carried attached to the hose, thus eliminating the job of attaching the nozzle at the fire grounds.

There are several other advantages of the fire to hydrant layout which are making it increasingly popular. The layout makes it convenient to use the pumper on every big line as the pumper can be connected to the hydrant the moment the line is laid. Pumpers can supply the exact pressures needed as determined by the size of the nozzle and the length of the line.

An important advantage of this evolution is that it simplifies the problem of estimating the amount of hose which may be needed. The line is not dumped in the street but is taken to the point of operation so there is no guesswork as to whether enough hose has been removed from the apparatus before the nozzle was attached.

Another advantage of the fire to hydrant layout is that the apparatus goes immediately to the fire without stopping. Ladders and other tools can be taken off without delay and used before the line is laid. This may be important in the event that ladders on the pumper are needed for rescue work as may be the case where there is no separate ladder truck.

Also there is the advantage that when the line is run from the apparatus at the fire the nozzle is taken off first and run to the point of operation. There is no need of pulling enough hose in the street to reach the fire before the line can be broken and the nozzle attached as with the hydrant to fire layout.

Of course the above evolution assumes that a big line is needed. When but one piece of apparatus responds to a fire there is always the problem of deciding whether to use the booster hose or to lay a big line. The correct solution is to always lay a big line if there is the slightest indication that it will be needed. It can always be reduced down to 1½-inch or booster hose.

Attaching the Nozzle to the Line

TO ATTACH the nozzle the coupling (or the hose immediately behind the coupling) is held in the "cupped" palm of the left hand and the nozzle is firmly grasped in the right hand, just above or below the shut-off according to its weight, while it is screwed on. With a little practice this is easily and quickly done. R. B. Criswell, State Fire Service Instructor for Maryland, recommends that in putting on the nozzle the man take a slightly squat position with the nozzle resting on the thigh. Where ground conditions are favorable the nozzle may also be attached or the threads tightened if necessary after attaching, by placing the coupling on the ground and putting a foot on the hose. This forces the coupling to tilt upward so that the nozzle can be screwed on.

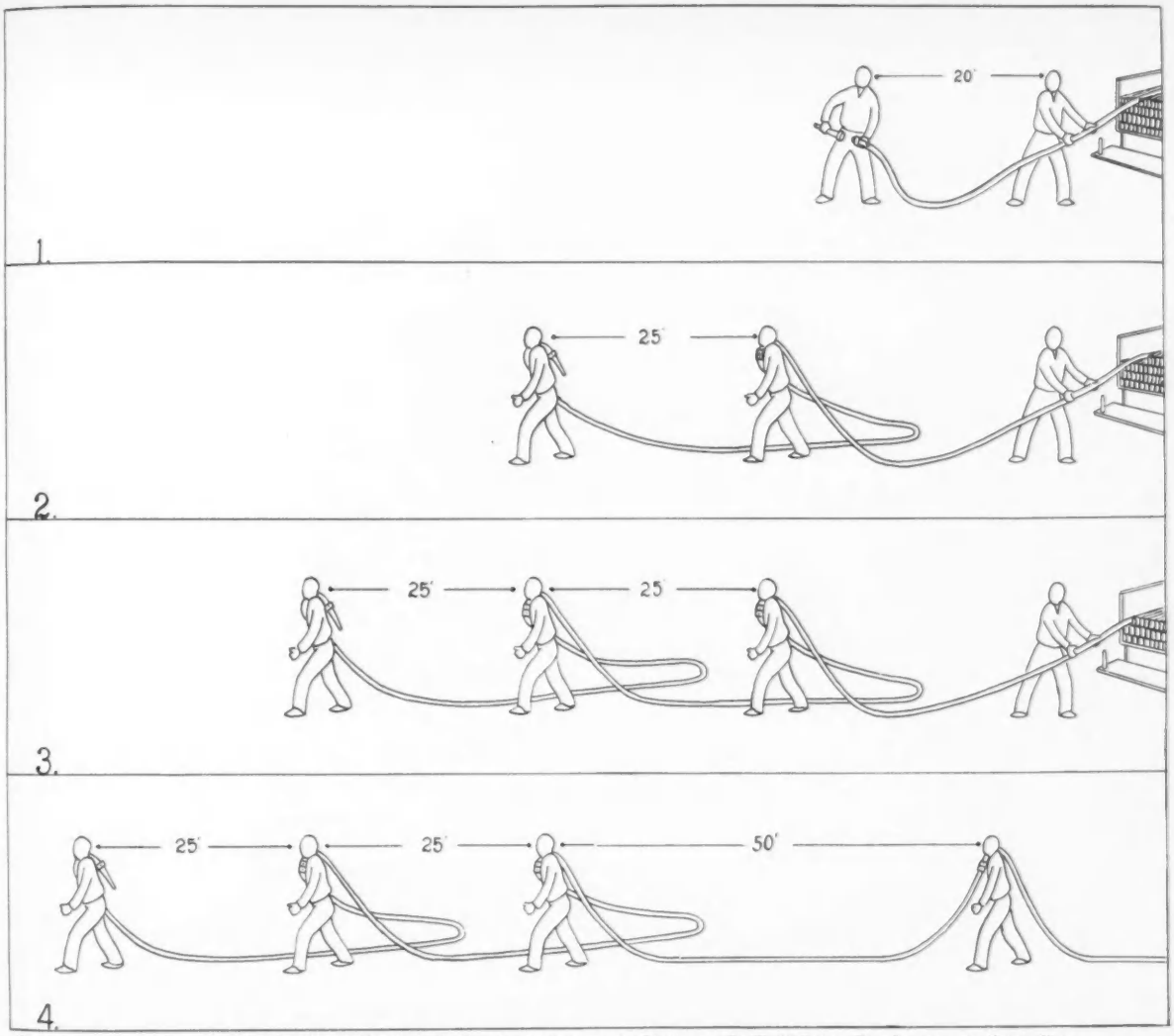
Stretching Short Lines by Hand Straightaway

THE following evolution is suggested for use where short lines (usually not over 200 feet long) must be laid by hand. When laying out hose by hand it should not be necessary to drop the hose in the street behind the apparatus. Time is frequently wasted by the all too common practice of pulling hose from the truck into the street because even when the folds are stretched out carefully the hose must only be picked up again and extended to the fire. With the following evolution the line as it comes from the truck is immediately advanced to the point of operation. This evolution is one of those which show the advantages of loading the apparatus for the fire to hydrant layout with the line leading off with a male coupling.

To perform the evolution the first man steps from the apparatus with the nozzle and attached line and places the hose over the right shoulder with the nozzle in back. The pipeman does not throw the nozzle over his shoulder because of the danger of injuring his own back or striking another man. Instead he slides his shoulder under the line.

If the nozzle is not carried attached to the line on the apparatus the pipeman upon stepping from the apparatus takes the first coupling in his left hand and the nozzle in his right hand and moves about 20 feet behind the apparatus to be out of the way of other members of the crew while he attaches the nozzle.

Where the hose is loaded to lead off with a female coupling the pipeman must use a double male coupling to connect the nozzle to the line. Under such conditions it is also obvious that a double female coupling would be used to connect the hose to the hydrant.



Evolution suggested by Assistant Chief Henry Haddock, Drillmaster, and drawn by Lieutenant R. W. McBrien, Fire Department, Lynn, Mass.

1. Where the nozzle is not carried attached to the line the pipeman steps back 20 feet from the apparatus and attaches nozzle. 2. Pipeman slides shoulder under hose with nozzle in back and starts for fire. Second man takes hose at next coupling and places hose over shoulder with coupling in front and follows the pipeman. 3. First three men proceed to fire walking 25 feet apart. Loops of hose provide needed line at point of operation. 4. Fourth and following men also take hose at couplings, but walk 50 feet apart pulling hose straight from apparatus.

As soon as the pipeman has the nozzle over his shoulder he starts for the fire. The driver pulls the line from the truck and as each coupling comes off a man places the hose over his shoulder with the coupling in front and follows the man ahead. The next two men follow the pipeman, walking about 25 feet apart. The first three men will be the hose crew who will operate the line when it is in place. The loops of hose formed as they walk 25 feet apart give plenty of slack line to work with at the point of operation. Other hosemen following the first three men also place a coupling on their shoulders but walk 50 feet apart in order to avoid unnecessary loops in the hose and to keep the line straight. Also where the crew is shorthanded it is possible where the line is stretched straight to drag more than 50 feet of hose per man. The last man, as a rule, does not carry the hose on his shoulder but follows and straightens out the line.

When the pipeman reaches the fire exactly the amount of hose needed has been stretched from the apparatus. The driver then goes to a hydrant and makes connections, assisted by the nearest hoseman if the pumper is used.

Where a fire company is so shorthanded as to frequently have less than four men available to lay a line, there are other methods which may be used. The most simple of these methods is described on page 8 of the April 1938 issue of VOLUNTEER FIREMEN, under the heading "How to Stretch a Line When Shorthanded." Another method for use when shorthanded is to carry a skid load of loose hose on top of the regular hose load.

Acknowledgment is made of helpful suggestions in the foregoing article made by Battalion Chief Robert B. Rogers, Seattle Fire Department; Professor Robert Criswell, University of Maryland, Fire Service Instructor; Clarence Goldsmith, Assistant Chief Engineer, National Board of Fire Underwriters; Professor H. R. Brayton, Texas A. & M. College; and Deputy Chief Horace Hutchins, Somerville Fire Department, Massachusetts Fire Department Instructors' Association.

State Laws Control "Bootleg" Fireworks

State Fire Marshals Back Legislation to Limit Use of Fireworks to Properly Supervised Displays

IN SPITE of safety campaigns of many years duration, the toll of casualties in the United States due to fireworks is increasing. This may be largely due to the fact that modern transportation permits bootlegging of illicit fireworks across city lines into areas where the use of fireworks is restricted by law. Incomplete statistics published by the American Medical Association show that 20 persons were killed and 7,205 received hospital treatment for fireworks injuries last year. In addition to the casualties, fireworks are a most dangerous fire hazard and are responsible for many serious fires and conflagrations. This year, under the sponsorship of the Fire Marshals' Section, the N.F.P.A. is recommending a new model state law designed to properly control the fireworks hazard. This law would limit the use of dangerous fireworks to properly supervised public displays. Four states are already obtaining excellent results with similar legislation.

"Hubert always believes in safety first!"

The value of such state control of the fireworks hazard is well illustrated by the experience of New Jersey where new fireworks regulations went into effect only last year. Fireworks casualties in New Jersey during 1937, totaled only 1.80 per 100,000 population as compared with 10.32 per 100,000 in the adjoining state of Pennsylvania which does not properly regulate the fireworks hazard. As a matter of fact most of the casualties in New Jersey were due to fireworks smuggled in from Pennsylvania.

The new model state fireworks law proposed by the N.F.P.A. was drafted by a committee of fire marshals headed by State Fire Marshal J. Vincent Pyle of Iowa. The State of Iowa adopted a fireworks law as a result of the conflagrations, started by fireworks, which swept the cities of Spencer and Remsen, Iowa, in the past few years.

The advantage of state control of fireworks should be almost obvious. They have the backing of the state fire marshal, state police, and other state authorities. Local officials can be a little more hard boiled, when necessary, in enforcing state laws than with local regulations. For example, the fireworks tragedy in Nampa, Idaho, last year was due to the repeal of municipal fireworks regulations under the pressure of local merchants who desired to sell fireworks. Even after the tragic loss of six lives due to ignition of fireworks stock in a drug store, these persons still prevented city authorities from restricting the sale and use of fireworks. Only state laws can overcome such local vested interests. State fireworks laws also prevent the bootlegging of fireworks into cities trying to enforce local fireworks ordinances.

In addition to the need for state control of fireworks, local regulations are also very desirable. Fireworks are bad enough in the country but are a serious conflagration hazard in built-up communities. In most cases the present state regulations on the subject of fireworks do not give sufficient protection in the congested areas. For a number of years many progressive communities have adopted ordinances prohibiting the use of fireworks by individuals and limiting use to properly supervised public displays. Where in effect, such ordinances have almost automatically eliminated the previously large numbers of injuries and fires due to fireworks.

IN APPRAISING the fireworks hazard many persons fail to note that fireworks are seldom used more than one week out of an entire year. The N.F.P.A. Department of Fire Record estimates that fireworks cause a fire loss of $580,000 a year. If fireworks were a year-round problem as are other fire hazards, they would be likely to cause a loss of over $30,000,000 each year. This sum would be greater than that of any other fire cause.

So great is the danger from fireworks in communities where their use by the public is not prohibited, that fires are expected as a matter of course. On Independence Day and other holidays on which fireworks are used it is generally necessary for volunteer firemen to be constantly on duty in the fire station because serious fires are almost certain to occur. Even in paid departments, companies must be cut into half units, reserve apparatus placed in service and the response to alarms drastically reduced to handle the numerous holiday calls.

One outstanding reason for the seriousness of the fireworks hazard is the widespread use of fireworks by children who lack appreciation of the dangers of explosives. Casualties are frequent when flimsy holiday clothing is ignited by sparklers, fire crackers or torches. Skyrockets and Roman candles frequently ignite wooden shingle roofs.

Many communities have proved that it pays to have a day of supervised sports ending with a real fireworks show, instead of turning the youngsters loose for the holiday with matches and explosives. An A-1 fireworks display properly supervised by experts, costs far less than the total amount the average community spends on dangerous fire crackers and is not followed by lasting regrets.

Many fire departments will sponsor the July 4th celebrations in their communities this year. Admission fees or income from concessions at the field where sports and fireworks displays take place may be a source of income for the fire department.

MACK leads again in STREAMLINED SAFETY

OFFICER AND DRIVER IN FRONT ROOM FOR SIX MEN IN REAR
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MISCELLANEOUS EQUIPMENT
PUMP OUTLETS ON BOTH SIDES OF TRUCK
HAND EXTINGUISHERS TO BE MOUNTED HERE
HARD SUCTION TO FIRE HYDRANT

Mack

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FIRE ENGINE DIVISION
NEW YORK, N. Y.

THE first enclosed pumper in America was introduced by Mack in 1935. Now, Mack scores again, with a model as up-to-the-minute as air-conditioning! Five of these new Mack pumpers, illustrated above, have just been delivered to the Chicago Fire Department.

Here's streamlined safety for Chicago's fire-fighters! An extra large cab seating nine men. All glass shatter-proof. The men are protected against the weather and also against possible collisions. This new Mack 1500-gallon pumper is the last word in fire-fighting!

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Dept. 20-30 DAYTON, OHIO

NEW CATALOGUES

This department is for the convenience of readers who wish to be advised of new products or services in the fire field. When writing for catalogues please mention VOLUNTEER FIREMEN.

Carpenter Mfg. Co., 178 Sidney St., Cambridge, Mass. Four page illustrated circular "Carpenter Master-Lights".

Federal Electric Co., 8717 South State St., Chicago, Ill. Bulletin No. 56. Details of Federal sirens.

The Fyr-Fyter Co., Dayton, Ohio. Four-page illustrated leaflet, describing 5-gallon farm fire extinguisher (new shape hand pump type).

Gamewell Co., Newton Upper Falls, Mass. Illustrated bulletin entitled, "Delayed Alarms", showing serious fires which may result from delays in sending alarms.

Mine Safety Appliances Co., Braddock, Thomas and Meade Sts., Pittsburgh, Pa. Bulletin describing H-H Inhalators.

Safe Manufacturers' National Assn., 7 East 44th Street, New York, N. Y. Forty page booklet on protection of records and the effect of record losses.

D. B. Smith & Co., 416 Main St., Utica, N. Y. Catalogue describing Indian Fire Pumps.

Bring Home $10.00 Easy Money

Pyrene Prize Letter Contest Pays for Stories of Good Work Done by Firemen With Extinguishers

THE widespread usefulness of approved fire extinguishers is well shown by the Pyrene Prize Letter Contest. In less than three years cash prizes have been won by firemen in 40 states, 6 Canadian provinces, Alaska and Australia for letters telling of effective work done with fire extinguishers. You may also know of a case where an extinguisher saved a life or made a good stop; just tell the facts your own way. Having won a previous prize does not bar you from making another entry. The contest is sponsored jointly by the Pyrene Manufacturing Company of Newark, N. J., and VOLUNTEER FIREMEN.

FIRST PRIZE — $10.00

ALFRED F. MYERS, *Chief*
Fire Department, Ashley, Ohio

Trailer Cargo Saved

"Early one morning last winter I was called and advised that a large semi-trailer outfit had been ditched about two miles from town and was burning. The driver had tried to take a short cut and the road was in such a condition that I hesitated to call out the department to make a run under existing circumstances. No true fireman can easily pass up an argument with a fire, however, so I promptly loaded two 2½-gallon foam extinguishers into my car and drove to the scene. The tractor was completely destroyed and the fire was eating into the cargo of the trailer. Before the contents of the extinguishers were exhausted the fire was licked. This proves that they are important in a fire company's equipment."

SECOND PRIZE — $3.00

EARL H. PAUTZ
Fire Department, Reedsville, Wis.

Gasoline Lamp Fire

"While working in my father's shop and hardware store in 1925 a party brought a pressure gasoline lamp in to be repaired. Having repaired many of these I proceeded to find the leak as I usually had done by dismantling the lamp down to the valve. I would pump up a good pressure and then examine for leaks. By talking with the party I forgot myself and took off the valve. Noticing this when I started to pump pressure, I told the party to hold his finger on the open pipe while I struck a match and held it around the tank for leaks. In doing so I got too close to his hand with the match so he pulled his hand away and about half a gallon of ignited gasoline shot over my head and on the wood ceiling. The other man ran outside. Not being able to see because of the flames about my head I felt my way to the corner of the shop, took an overcoat and threw it over my head to extinguish the flames on myself. I then grabbed a 1-quart carbontetrachloride extinguisher we had there and in a short time had the fire put out. Luckily in a few weeks my face healed all right, and a $20,000 stock and store building was saved."

THIRD PRIZE — $2.00

C. E. FARROW
Fire Department, McNary, Arizona

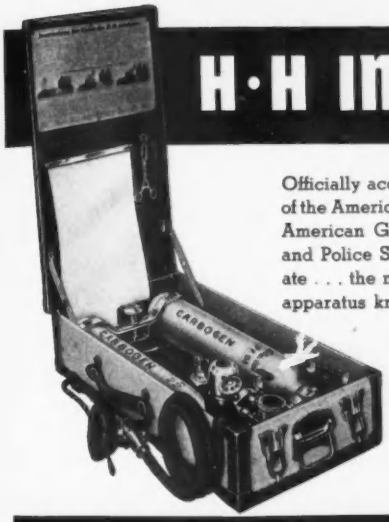
Saves Million Dollar Plant

"On April 27, 1938 at 6:45 o'clock I went into the filing room of our plant, which is upstairs, and hearing an unusual noise I looked out the window and saw a 150 horse power motor on fire. The fire had spread up to the roof which was about seven feet above the motor. I grabbed a 2-quart carbontetrachloride fire extinguisher and jumped out the window and soon had the fire under control. Had I been a few minutes later a million dollar plant would have been at the mercy of the fire as there were but a few men on the job at that time."

CONTEST RULES

1. Contestants in the Pyrene Prize Letter Contest must be members of their local fire department.
2. Letters are to describe actual experiences where an approved fire extinguisher of any make has saved lives or property.
3. Trade names may be used but will be deleted in publication. Publishers reserve the right to edit winning letters to permit publication.
4. Each contestant automatically vouches for the truth of the facts presented from his own or others' experience.
5. Only one letter may be submitted each month.
6. Letters must be legibly written in ink or typewritten on white paper, one side only. Preference will be given to letters not over 250 words in length.
7. Letters received after the 8th of the month will be judged in following month's competition.
8. Monthly prizes in cash will be: 1st, $10.00; 2nd, $3.00; and 3rd, $2.00.
9. Address contest letters to Pyrene Prize Letter Contest, National Fire Protection Association, 60 Batterymarch St., Boston, Mass.

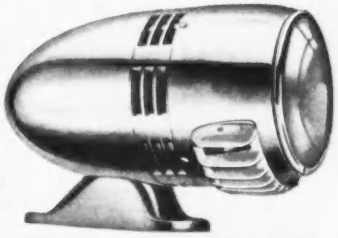
RESCUE EQUIPMENT EVERY FIRE DEPARTMENT SHOULD HAVE



H·H INHALATORS

Officially accepted by the Council on Physical Therapy of the American Medical Association . . . approved by the American Gas Association and the Association of Fire and Police Surgeons. Compact, portable, easy to operate . . . the most widely used and effective resuscitation apparatus known for cases of gas asphyxia, drowning, electric shock, etc.—*Write for demonstration.*

MINE SAFETY APPLIANCES COMPANY
BRADDOCK, THOMAS & MEADE STREETS
PITTSBURGH, PA.
District Representatives in Principal Cities



The New Federal "66" Junior Long Roll Siren

• Users of the lighter emergency vehicles appreciate this Siren for economy — ruggedness and beauty. Larger than the usual siren for light apparatus, it has both more sound volume and a larger, stronger light. Made to meet all average requirements. Rolls for more than thirty seconds. Specify the Federal "66" Junior Long Roll Siren on your equipment under actual conditions—it will do the rest! Every siren is precision made—weather tested.

Specifications:

MODEL.....“66”
FINISH.....Chrome
VOLTAGE.....6, 12, 24, or 32
DIMENSIONS....14¾” long x 8¼” high
NET WEIGHT....13¼ lbs.
BRACKETS.....Pedestal or Bar

Write for bulletin No. 56

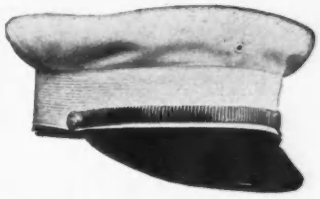
FEDERAL ELECTRIC CO.
8717 SOUTH STATE ST., CHICAGO, ILL.

You Get the Best When You Insist On

BRUNSSEN'S

Helmet Brand

Regulation Fireman caps.



Officers' White Collar Duck caps with Extra cover at $3.75. New York Regulation gilt or chromium plated strap at $1.00 extra.

Privates' Blue caps at $1.75 to $2.75 apiece.

Postage extra

George Brunssen Co., Inc.
104 Bleecker St., New York

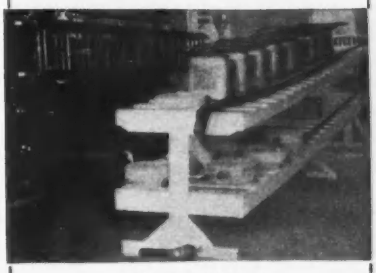
Unequalled for Fighting Grass, Rubbish and Spot Fires!

THE ONE MAN FIRE DEPT.

VOLUNTEER FIREMEN!

INVESTIGATE the FAMOUS INDIAN FIRE PUMP

An indispensable item of fire fighting equipment is THE INDIAN FIRE PUMP, strongly built 5 gal. extinguisher for grass, roof, awning or spot fires. Metal tank fills with clear water. Easy working of pump throws powerful 50 ft. stream. Ventilated tank prevents cold and dampness reaching carrier's back. Thousands of INDIANS are in use by departments all over the U. S. Write for descriptive circular.



Indians in Rack at Long Lake, N. Y. Fire House

Indians Are Ideal for Roof or Chimney Fires

D. B. SMITH & CO.
416 Main St., Utica, N. Y.

Pacific Coast Agents:
Hercules Equip. & Rubber Co.
550 Third St., San Francisco, Cal.
Pacific Marine Supply Co.
1217 Western Ave., Seattle, Wash.
Western Loggers' Machinery Co.
302 S. W. 4th St., Portland, Oregon

Selected Publications on Fire Subjects

Write for a complete list of N.F.P.A. publications. Following is a partial list of popular and useful books and pamphlets available at the prices quoted. Address: National Fire Protection Association, 60 Batterymarch St., Boston, Mass.

Automatic Sprinkler Systems, Use of by Fire Departments. General principles of fighting a fire in a building equipped with automatic sprinklers.
12 pages, 2 diagrams .....10 cents.

Fires in "Fireproof" Buildings. Fire protection engineers prefer the term "fire resistive" to "fireproof" since the ability of a building to stand up against fire is relative. Here is a discussion of fires in buildings of fire resistive construction based on a record of over 3400 such fires compiled by the N.F.P.A. Department of Fire Record. Photographs and stories of the principal large loss fires in fire resistive buildings.
32 pages, 28 illustrations .....15 cents.

Lightning, Code for Protection Against Nine tenths of the 400 annual deaths from lightning and a large percentage of the property loss due to lightning occurs in rural districts. Lightning rods have demonstrated that they will give buildings positive protection from lightning if properly installed. This publication shows how to install them. Also covers lightning protection for smokestacks, aircraft, ships, trees and live stock in fields.
40 pages, 6 illustrations .....15 cents.

Carbon Dioxide Fire Protection. By Robert S. Moulton, Technical Secretary, N.F.P.A. Use of this form of protection in electrical equipment, manufacturing processes involving flammable liquids, fur vaults and record protection. Characteristics of carbon dioxide, its smothering action on fires, its cooling effect as compared with water and its action on burning gases, liquids and solids. Description of carbon dioxide extinguishing devices, their advantages, limitations and suitability; portable extinguishers, permanent piped installations, electric power house installations, dip tank systems, and room flooding systems.
20 pages, 13 illustrations .....20 cents.

Refrigeration. Description of common types of mechanical refrigeration: compression, absorption and direct expansion systems. Domestic refrigeration. General data on how poisonous or flammable various refrigerants may be. Physical properties of refrigerant gases and the physiological reactions of the human body to these gases in various concentrations. Also explosion data. Gases covered include ammonia, butane, carbon dioxide, ethane, ethyl chloride, methyl chloride, propane, sulphur dioxide, phosgene, chlorine, bromine, hydrogen sulphide, hydrocyanic acid, hydrogen chloride, carbon monoxide, benzene, methyl bromide, chloroform, carbon tetrachloride, ethyl bromide, gasoline vapor and illuminating gas.
24 pages, 2 illustrations .....20 cents.

School Fires. A record of 875 school fires reported to the National Fire Protection Association. Includes the story of the Collinwood, Ohio, school fire in which 173 children and 2 teachers perished and 6 other major school disasters involving a total loss of life to 198 persons. Analysis of the fires tabulating causes, type of buildings, places of origin of the fire and the like. Selected reports of typical fires illustrating points of special interest such as the effectiveness of automatic sprinklers and the value of fire drills.
34 pages, 25 illustrations .....25 cents.

Hospital and Institution Fires. A record of 202 hospital and institution fires reported to the National Fire Protection Association. Includes the story of the Cleveland Clinic fire where 124 people died as the result of the hazard of x-ray nitrocellulose film and seven other major disasters involving a total loss of life to 228 persons. Analysis of the fires tabulating causes, type of buildings, places of origin of the fire and the like. Selected reports of typical fires, illustrating points of special interest such as the effectiveness of automatic sprinklers, and the value of fire drills.
68 pages, 37 illustrations .....35 cents

City Planning and Zoning. A brochure prepared by N.F.P.A. Committee on City Planning and Zoning showing the relation of these subjects to fire prevention and fire protection. History and legal background of city planning and zoning. Covers the part played by such factors as fire resistive buildings, sprinklered buildings, locations of fire stations and the central fire alarm headquarters, water supply, telephone service, mutual aid and fire alarm box distribution.
44 pages and 4 page supplement, 8 maps, 8 photographs .....50 cents.

A New Fire Department Manual

Hose

and Hose Couplings

a substantial manual of 44 pages, 6 in. by 9 in., 11 illustrations, containing informative material on the selection, care and testing of hose and hose couplings, compiled from recommendations of N.F.P.A. committees and other authoritative sources. Manual shows how to load hose so as to prevent deterioration and how to handle it at fires to avoid unnecessary damage. Includes a detailed set of specifications for use in buying hose.

Single copies .....25 cents

Put a copy in the hands of every fireman in your department.

National Fire Protection Association
INTERNATIONAL
60 Batterymarch St., Boston, Mass.

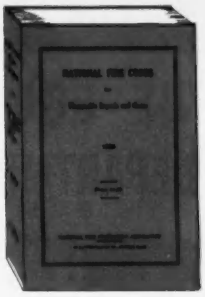
PARTIAL CONTENTS:

National Fire Codes

for Flammable Liquids and Gases

360 pages, 6 x 9 in.
$1.50 each postpaid

Flammable Liquids Ordinance
Marine Oil Terminals
Freeing Tanks of Flammable Vapors
Tank Truck Ordinance
Oil Burner Regulations
Kerosene or Oil Stoves
Gasoline Stoves
Gasoline and Kerosene on the Farm
Liquefied Petroleum Gas Code (Propane and Butane)
Compressed Gas Systems
Liquefied Petroleum Gas Tank Trucks
Motor Craft, Pleasure and Commercial
Airplane Fueling Operations
Dry Cleaning and Dry Dyeing
Paint Spraying and Spray Booths
City Gas, Installation, Piping, Fittings
Odorization of Gas
Acetylene for Lighting, Heating and Cooking
Gas Systems for Welding and Cutting
Anaesthetic Gases and Oxygen in Hospitals
Refrigeration Safety Code
Fire Hazard Properties of Flammable Liquids, Gases and Volatile Solids



The Most Important Fire Book That Will Be Published This Year

National Fire Codes

for Flammable Liquids and Gases

$1.50 postpaid

The public demands expert advice, not guesses, on matters of fire safety. The answers to such problems are given in this authoritative volume. Not one man's opinion or experience, but the considered judgment of experts in their several fields, these recommendations may be quoted as official. In all, the volume includes 36 important sets of regulations covering the entire range of hazards from flammable liquids and gases.

Fires in flammable liquids and gases are tougher and more dangerous than the ordinary run of alarms answered. These codes show primarily how the fires may be prevented. If you know the safeguards for each of these hazards, it will also enable you to promptly and safely handle these fires when they come along.

NATIONAL FIRE PROTECTION ASSOCIATION
INTERNATIONAL
60 Batterymarch St., Boston, Mass.

Ready This Month

A Model Records and Reporting System for Fire Departments

Price: $2.00

The National Fire Protection Association is publishing, jointly with Public Administration Service of Chicago, a long needed manual to assist fire departments in modernizing their records systems, and their reporting procedures. This publication will show how a record system can be installed and how it should operate. It will include copies of the 27 forms considered most important in fire department work. It may be adapted to the needs of any municipal fire department. If you will send your name and address a copy of the circular describing this record system will be mailed to you.

CONTENTS

I. Use of records and reports.
II. Company records and reports.
III. Officers' reports on fires and alarms.
IV. Inspection records.
V. Building fires classified by occupancy and cause.
VI. Headquarters' records.
VII. Fire alarm office records.
VIII. Consolidated reports.
IX. Annual reports.

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INTERNATIONAL
60 Batterymarch St., Boston, Mass.

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